

CLAIMS

I claim:

1. A material collider apparatus for producing finely ground material comprising a base frame assembly including a housing cavity, a housing assembly secured to said base frame assembly so as to rest at least partially within said base frame housing cavity, said housing assembly being formed by a pair of interconnected cylindrical chambers which are in fluid communication and in overlapping relation along the length thereof, a pair of rotor assemblies each having a rotor, with one rotor being rotatably maintained coaxially in each cylindrical chamber, said rotors extending in parallel relation throughout the length of the chambers, each rotor assembly further including a plurality of disc members secured to each rotor, said disc members extending generally transverse to the longitudinal axis of the chambers, and at least one thrust guide member in the form of an elongated bar or rod rigidly secured to at least one disc member, at least one flow weir secured to the inner periphery of at least one of said cylindrical chambers, and means for rotating said rotor assemblies.

2. An apparatus according to claim 1 wherein at least one flow weir is secured to the inner periphery of each of said cylindrical chambers.

3. An apparatus according to claim 1 wherein multiple flow weirs are secured to inner peripheries of said cylindrical chambers.

4. An apparatus according to claim 1 wherein said flow weirs are approximately one to six inches in width.

5. An apparatus according to claim 1 wherein said flow weir is disposed adjacent the discharge side of said thrust guide.

6. An apparatus according to claim 1 wherein said flow weir is approximately 1/4 inch thick.

7. An apparatus according to claim 1 wherein said flow weir is spaced approximately 1/4 to one inch from said thrust guide.